

Application No.: 10/738395
Amendment dated: April 4, 2007
Reply to Office action of February 5, 2007

cause wear, but also cause damage to the pawl. Thus, as mentioned in paragraph 0009, an object of the invention is to achieve a low cost ratchet pawl having high strength as well as good wear resistance. The invention achieves superior strength as well as wear resistance by controlling the sintered composition and its density, as explained in paragraph 0031.

The Takahashi patent, discloses compositions for sintered valve seats, piston rings, etc. which are designed primarily for resistance to heat and corrosion as well as high compressibility, and, at least with certain additives (hard particles or graphite), also for wear resistance.

Takahashi mentions, at column 5, line 28, that molybdenum improves the strength of sintered alloys. However, in the same paragraph, Takahashi also notes that, in the case of a sintered alloy containing carbon, part of the molybdenum reacts with the carbon to form a carbide, thereby improving wear resistance. The implication is that Takahashi can achieve the combination of improved strength and wear resistance, but only when carbon is present. But, as mentioned in the previous response, the presence of carbon would result in a sintered alloy different from that defined in the applicants' claim.

Takahashi also mentions that graphite powder can also strengthen the matrix (column 6, line 62). Again, the presence of graphite powder would result in a sintered alloy different from that defined in the applicants' claim.

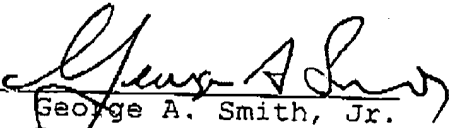
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A person having ordinary skill in the art would not easily arrive at a sintered material capable of achieving the combination of high wear resistance and high strength needed in a timing chain tensioner pawl for use in a diesel or other direct injection engine, and would not find in Takahashi a suggestion of a suitable high strength material corresponding to the material defined in applicants' claim. Accordingly, Takahashi does not demonstrate that the invention would have been obvious.

The applicants therefore request favorable reconsideration and allowance of their application.

Respectfully submitted,
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